



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

H/A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,709	04/13/2006	Masayuki Iwase	270451US8PCT	1424
22850 7590 06/22/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER MOONEY, MICHAEL P	
			ART UNIT 2883	PAPER NUMBER
			NOTIFICATION DATE 06/22/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,709	<b>Applicant(s)</b> IWASE ET AL.	
	<b>Examiner</b> Michael P. Mooney	<b>Art Unit</b> 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/22/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 7-14 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only and cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-2, 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Takano (6985666).**

Takano teaches an optical component having a waveguide groove (figs. 1-3), comprising: a waveguide holding plane (figs. 1-3) having a surface shape extending along a specific axial direction and capable of holding at least one optical waveguide while positioning said optical waveguide at at least a part of at least one side face of said waveguide holding plane (figs. 1-3; col. 7 lines 40-43); and an opening portion (col.

Art Unit: 2883

7 lines 40-43) extending substantially oppositely to said waveguide holding plane and being smaller in width than an outside diameter of at least said one optical waveguide in a specified widthwise direction perpendicular to said specified axial direction (figs. 1-3; col. 7 lines 40-43).

Thus claim 1 is met.

Takano teaches wherein, in said waveguide groove, said waveguide holding plane has a half-cylindrical shape obtained by extending a circular arc 180.degree. larger than a specific angle in a center angle in said specific axial direction perpendicular to the plane of the circular arc (col. 7 lines 40-43), and said opening portion extends between a pair of opposed peripheral end portions in a peripheral direction to the half-cylindrical waveguide holding plane (col. 7 lines 40-43; figs. 1-3).

Thus claim 2 is met.

Takano teaches wherein the sectional shape of at least a part of said waveguide groove is .OMEGA.-shaped (col. 7 lines 40-43). The cited passage in Takano inherently provides for an .OMEGA.-shape. Thus claim 6 is met.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3-5 are rejected under 35 U.S.C. 103a as being unpatentable over Takano (6985666) and further in view of Uno et al. (6406196).**

Takano teaches an optical component having a waveguide groove (figs. 1-3), comprising: a waveguide holding plane (figs. 1-3) having a surface shape extending along a specific axial direction and capable of holding at least one optical waveguide while positioning said optical waveguide at at least a part of at least one side face of said waveguide holding plane (figs. 1-3; col. 7 lines 40-43); and an opening portion (col. 7 lines 40-43) extending substantially oppositely to said waveguide holding plane and being smaller in width than an outside diameter of at least said one optical waveguide in a specified widthwise direction perpendicular to said specified axial direction (figs. 1-3; col. 7 lines 40-43). Thus claim 1 is met.

Takano teaches wherein, in said waveguide groove, said waveguide holding plane has a half-cylindrical shape obtained by extending a circular arc 180.degree. larger than a specific angle in a center angle in said specific axial direction perpendicular to the plane of the circular arc (col. 7 lines 40-43), and said opening portion extends between a pair of opposed peripheral end portions in a peripheral direction to the half-cylindrical waveguide holding plane (col. 7 lines 40-43; figs. 1-3). Thus claim 2 is met.

Takano teaches wherein the sectional shape of at least a part of said waveguide groove is .OMEGA.-shaped (col. 7 lines 40-43). The cited passage in Takano inherently provides for an .OMEGA.-shape. Thus claim 6 is met.

Takano does not explicitly teach a filter.

Uno et al. teaches a filter between two in-groove fiber segments (e.g., figs. 1A, 1B, 2).

Takano and Uno et al. are combined by taking the technology of Takano which teaches two optic fiber waveguide (OF WG) segments in a semi-circle-shaped groove with an opening portion smaller in width than an outside diameter of the said OF WG segments and applying it to the filter-adjacent-two-waveguide-segments-in-a-groove technology of Uno et al. to obtain the instant invention of a device with two optic fiber waveguide (OF WG) segments in a semi-circle-shaped groove with a filter adjacent to them and the groove having an opening portion smaller in width than an outside diameter of the said OF WG segments. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make such a combination for the purpose of providing simplification of alignment/assembly of the device.

Thus claim 3 is rejected.

It is further noted that it is conventionally known in the art to put a filter adjacent to two fiber segments that reside in grooves.

Uno et al. teaches wherein said fiber has a specific angle of inclination to the optical axis of a propagation light propagating through said optical waveguide (e.g., figs. 1A, 1B, 2). Thus claim 4 is rejected.

Uno et al. teaches wherein said filter is provided on the end face of the optical waveguide (e.g., figs. 1B, 4A, 4B). Thus claim 5 is rejected.

Art Unit: 2883

**Conclusion**

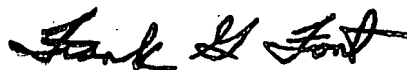
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael P. Mooney  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Art Unit 2883

FGF/mpm  
6/13/07